STEPS
Sunrise Training & Education Programs

Mobility is POWERful!

An In-depth Overview of Power Mobility

Presented by:
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MANUAL POWER ADULT PEDIATRICS SEATING GERIATRICS CONTROLS FUNDING

Seminar Content Disclosure

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Course Objectives

Upon completion of this course, participants will be able to:

- Articulate the steps required to complete a thorough power mobility evaluation.
- List at least 2 differences in the performance of a rear wheel drive, front wheel drive, and mid-wheel drive power wheelchair on uphill, downhill, and even surfaces
- State the 3 clinical justifications for each dynamic power seating functions including tilt, recline, elevating leg rests, and seat elevate.
- Define the difference between expandable and non-expandable electronics
- Understand the critical components required in a clinical justification letter or evaluation when requesting funding for a power chair.

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Housekeeping

Restrooms

Breaks

Handouts

CEUs

CEU Requirements

- IACET CEU CREDIT
- Must be paid in full
- Must sign in at the registration table
- Must provide last 4 of your SSN
  - If you didn't provide it when you pre-registered, there will not be a certificate onsite
  - You can still provide the last 4 of your SSN now on your evaluation, certificate will be provided within 45 days
- Must complete the evaluation form and turn it in at the close of the seminar
- It is a requirement that to receive CEU credit, you must attend the full course

AGENDA

30 mins	Introduction to Power Mobility
45 mins	Evaluation Process
45 mins	Seating & Positioning for Power Mobility
15 mins	Break
45 mins	Power Mobility Base Options
30 mins	Hands-on Activity
60 mins	Lunch
75 mins	Electronics & Access
45 min	Hands-on Activity
15 mins	Break
30 mins	Training
30 mins	Documentation and Funding
30 mins	Group Activity
15 mins	Questions & Wrap-up

Words of Wisdom

- "Continuous effort – not strength or intelligence – is the key to unlocking your potential." - Winston Churchill
- "Being able to drive a power chair has opened up a world for our son that experts always told us we could only dream of…We will NEVER get tired of chasing him!" – Parent

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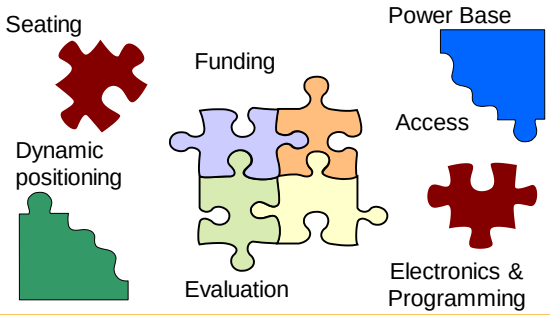
Pieces of the Power Puzzle



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Who is appropriate for power??

Pediatrics? Geriatrics?

Long Term Manual Chair Propellers?

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Understanding power mobility myths

Providing power mobility will:

- Cause a decrease in independence or function
- Will encourage a person to become lazy
- Prevent a client from ever walking or propelling manually
- Eliminate the use of the end user's manual wheelchair which is how they currently exercise!

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Is client appropriate for power?

To be appropriate for power, client ***does not***:

- Need to show a certain set of motor skills
- Need a certain set of cognitive abilities
- Need to show proficiency in all driving skills…right away
- Be completely unable to ambulate or propel manually
- Need to be a certain age

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Power: To whom? & where?

WHOM?

- Individuals with diagnoses that may include:
  - Spinal Cord Injury (SCI)
  - Cerebral Palsy (CP)
  - Muscular Dystrophy (MD)
  - Traumatic Brain Injury (TBI)
  - Multiple Sclerosis (MS)
  - Amyotrophic Lateral Sclerosis (ALS)
- Clients of all ages (pediatrics to geriatrics)
- Long term manual wheelchair users

WHERE?

- Work
- School
- Community mobility
- Vocational use

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Pediatrics and Power

- Children develop thru exploration/stimulation
- Children without physical impairments begin mobility at ~12 mo
- Give children with disabilities the same opportunities
  - Introduction to power mobility as young as 12-18 months
  - Time and practice to learn and make mistakes
  - Appropriate supervision
- Marginal ambulation or manual propulsion:
  - Risk of stress/damage to muscles, joints
  - Requires energy and endurance
  - Reduces energy available for other activities

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Geriatrics and Power

Is anyone ever "too old" to utilize power??

- Maintain independent mobility
- Maximize function
- Provide energy conservation
- Protect/conserve upper extremity (UE) function and health
- Increase socialization
- Increase self esteem and motivation
- Improve quality of life

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Long Term Manual Chair Users

- Manual wheelchair propulsion involves:
  - UE muscles propelling weight of chair and user
  - UE muscles/joints used in abnormal positions
  - UE muscles are over-stretched and overused
- With pre-existing injury:
  - Muscle imbalance already exists due to weakness or paralysis of specific muscles
- At some point power becomes a safer, more functional option

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Bariatric Considerations

- Dimensions
- Weight
- Altered body proportions
  - Increased tissue in the buttocks and lower back
  - Increased thigh and abdominal tissue
  - Distribution of weight
- Increased risk of RSI and physiological stresses (e.g. cardiac) due to weight and ergonomics

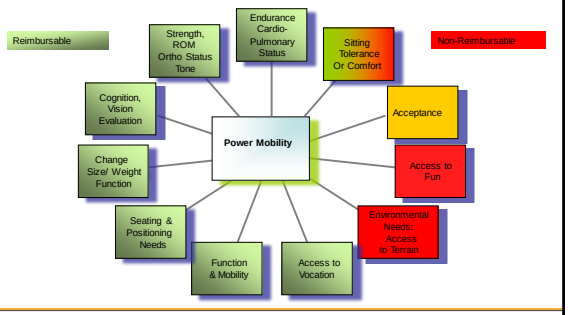
Pieces of the Power Puzzle

- **Evaluation**
- Seating & Positioning
- Power base
- Electronics & Programming
- Access
- Training
- Documentation & Funding

Clinical Best Practices

- Are there any related to seating and mobility?
- What would they be?

Key Assessment Information



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Prior to the evaluation

- Completion of an intake form by the client and/or caregiver. Information should include:
  - Funding
  - Goals of the evaluation
  - Brief case history
  - Current level of function
  - AT experience
- Contact other team members including assistive living, outpatient, and/or school/day treatment programs.
- Arrange for loaner equipment (i.e. power w/c, alternative controls, etc.) as needed

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During the evaluation

- Explain the purpose and process of the evaluation
- Review goals, funding, and case history
- Current medical status and level of function
- Evaluate status in current equipment as appropriate
- Screen cognitive, visual, and hearing status
- Complete a physical assessment and mat evaluation
- Environment assessment and transportation discussion
- Driving assessment

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Mat Evaluation

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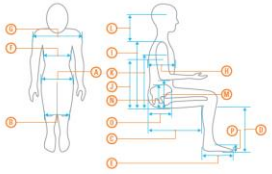
Measurements



A. HIP WIDTH _____
B. WIDTH AT KNEE _____
C. BUTTOCKS TO POPLITEAL:
R _____ L _____
D. POPLITEAL TO BOTTOM OF FOOT _____
WITH SHOES? Y / N
E. FOOT LENGTH _____
F. CHEST WIDTH _____
G. SHOULDER WIDTH _____
H. CHEST DEPTH _____
I. SEAT TO TOP OF SHOULDER:
R _____ L _____
J. SEAT TO INFERIOR ANGLE OF SCAPULA:
R _____ L _____
K. SEAT TO AXILLA:
R _____ L _____
L. TOP OF SHOULDERS TO OCCIPUT _____
M. SEAT TO ELBOW:
R _____ L _____
N. SEAT TO PSIS _____
O. BACK TO ASIS _____
P. FOOT HEIGHT _____

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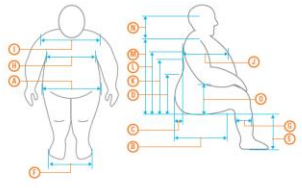
Measurements



A. SEAT WIDTH _____
B. BUTTOCKS TO POPLITEAL:
R _____ L _____
C. BUTTOCKS TO BACK (GLUTEAL SHELF) _____
D. HEIGHT OF GLUTEAL SHELF _____
E. POPLITEAL TO BOTTOM OF FOOT _____
WITH SHOES? Y / N
F. FOOT WIDTH _____
G. CALF WIDTH _____
H. CHEST WIDTH _____
I. SHOULDER WIDTH _____
J. CHEST DEPTH _____
K. SEAT TO INFERIOR ANGLE OF SCAPULA:
R _____ L _____
L. SEAT TO AXILLA:
R _____ L _____
M. SEAT TO TOP OF SHOULDERS:
R _____ L _____
N. TOP OF SHOULDERS TO OCCIPUT _____
O. SEAT TO ELBOW:
R _____ L _____

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Prior to getting your client "Behind the Wheel"

- Observe the client's movement patterns while in his/her seating system and on a mat/flat surface.
- If the client has other AT devices (i.e. communication devices, tablet computer, switches, etc.), ask the client to demonstrate how he/she uses the item(s).
- Set-up the seating system so that the client is in most functional position for his/her movements.
- Identify activities or items that are highly motivating to the client.
- Ensure that the client is positioned for function as opposed to perfection.

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Questions to consider

- Does the client have a progressive condition?
- What type of postural support / seating?
- Is dynamic seating medically necessary?
- Where will the chair be utilized?
- How might the client operate the chair?
- What other devices will the client be controlling through their wheelchair?

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Evaluate for Potential, Not a Device!!!

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After the evaluation

- Review recommendations of equipment and/or therapeutic as appropriate with the client and caregivers.
- Discuss the client's and/or caregiver's responsibilities in the process and the next steps.
- Ensure that the client and/or caregiver are in agreement with the plan.
- Review order and funding process, including potential delivery timeframe for recommended equipment.
- Provide contact information and an overview of the evaluation to the client and/or caregiver.

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Where do we stumble?

- Sometimes shortcuts are taken with the evaluation
- Sometimes trial is not possible
- Sometimes we battle with the conflict between therapeutic perfection – safety and function.
- Sometimes we do not find out or understand their funding situation before the evaluation.

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Pieces of the Power Puzzle

- Evaluation
- **Seating & Positioning**
- Power base
- Electronics & Programming
- Access
- Training
- Documentation & Funding

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Seating and Positioning

For each client, consider:

- Size needed
- Potential for growth or weight change
- Potential for change in function
- Postural control and positioning needs
  - Seat/back angle and contour
  - Pelvic, trunk or head positioning supports
  - Skin protection material
- Need for dynamic positioning

Seating and Positioning

Captain's Seat

Modular and Rehab Seat

Dynamic Seating

Captain's Seat

Appropriate client:

- Fits in standard seat sizes
- Maintains optimal posture with:
  - Standard back height
  - No positioning supports
  - Minimal contour
  - Minimal seat to back angle adjustment
- Does not require dynamic seating
- Needs comfortable seating
- Ability to independently complete weight shifts

Rehab Seat

Appropriate client:

- Requires specific seat/back size
- Might require seat depth growth
- To maintain posture requires:
  - Specific back height
  - Positioning supports
  - Specific seat or back contour
  - Specific seat to back angle
- Might require some dynamic seating

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Modular and Adjustable Seating

- Clients can change in size, function, cognition and environment
- Changes due to progressive condition, recovery, aging and/or medical intervention
- Appropriate system should:
  - Meet current needs
  - Have modularity to adapt to changing needs
- Equipment changes should be:
  - Economical and easy to do
  - Cause least amount of disruption to client

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Dynamic Seating

- Who is appropriate for tilt, recline, seat elevator, power elevating leg rests (ELRS)?
  - Consider the client's:
    - Ability to change position / shift weight
    - Postural stability
    - Physiological risks
    - Problems with homeostatic control
    - Mobility Related Activities of Daily Li (MRADLs) needs
    - Environment demands

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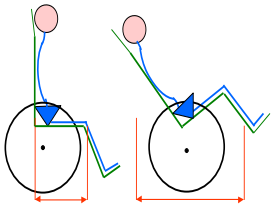
Clinical Justifications: Tilt

- Provides for ***pressure redistribution***
- Accommodates joint contracture(s)
- Maintains specific seated angles
- Adds no resulting shear forces
- Minimizes extensor spasticity
- Provides for ***position change***
- Minimizes effects of gravity
- Provides increased trunk stability and head control
- Improves postural alignment
- Improves visual field (fixed kyphosis)
- Maintains access to specialty devices mounted on chair

Clinical Concerns: Tilt

- Poor access to perineal area
- No change in hip or knee position
- Risk of contracture
- Discomfort with sensate clients?



Lateral Tilt

- Designed to complement traditional positioning solutions.
- Provides pressure reduction, aids in transfers and assists in respiration, swallowing and gastric emptying

Clinical Justification: Recline

- Provides ***change in position & body angles***
  - Provide relief for sensate clients
- Allow for personal care while in chair
  - Bladder management, dressing
  - Avoid additional transfers
- Allow supine transfers

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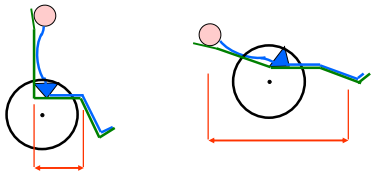
Clinical Justification: Recline

- Shifts and expands weight bearing surfaces
- Decreases peak pressures
- Provides different body angles



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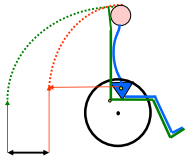
Clinical Concerns: Recline

- Shear Forces During Recline
- Pivot point of equipment does not match client's pivot point at hip
- Extensor Spasticity



Low pivot point of recline

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Clinical Justification: Tilt & Recline

- Tilt and recline together
  - Maximum amount of pressure re-distribution
  - Maximum relief from gravity's forces
  - Improve head control and postural stability

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Justification: Power Center Mount/ELR's

- Elevates LE to:
  - Accommodate knee extension contractures
  - Accommodate orthotics, prosthetics, casts
  - Prevent formation of edema
  - Provide position change/support with power recline

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Justification: Seat Elevator

- Client needs varying seat height to:
  - Reduce shoulder pain with transfers
  - May help delay secondary complications to the shoulders
  - Degree of the upper arm elevation during reaching influences the load on the shoulder
  - When reaching from a elevated position the load is reduced
  - Interact at peer level
  - Access environment
  - Perform ADL / IADL
  - Perform vocational or school activities

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Additional Power Seating

Power Sliding Seat Pan

- Allows for up to 6" of forward and rearward travel
- Assists with transfers
- Assists with COG placement

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Pieces of the Power Puzzle

- Evaluation
- Seating & Positioning
- **Power base**
- Electronics & Programming
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Drive Wheel Base Options

Rear-Wheel Drive (RWD)

Mid-Wheel Drive (MWD)

Front-Wheel Drive (FWD)

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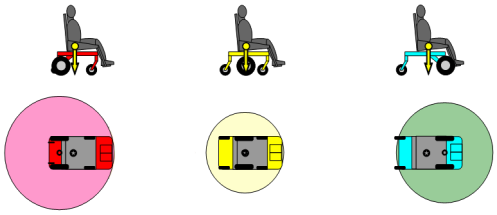
How Does Turning Radius Differ?

RWD MWD FWD



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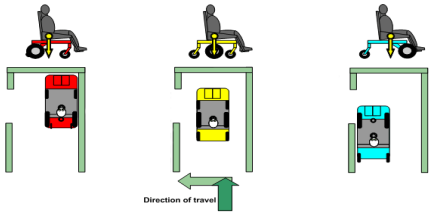
What Space is Required to Turn?

RWD MWD FWD



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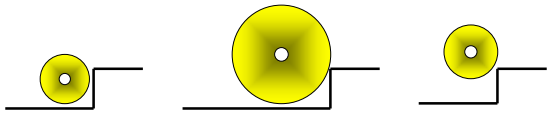
Obstacle Climbing

- Is the axle of the front wheel/caster higher than the obstacle?



- FWD might have greater ability to climb obstacles compared to RWD or MWD
- RWD and MWD used raised and/or dynamic stabilizers for assist

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Tracking

- RWD
  - Mass over drive wheels increases with acceleration
  - Directional stability increases exponentially as speed of chair increases
- MWD
  - Can be directionally stable or unstable based on actual drive wheel position
- FWD
  - Mass over drive wheels decreases with acceleration
  - Directional stability decreases exponentially as speed increases
  - "Fish Tailing"

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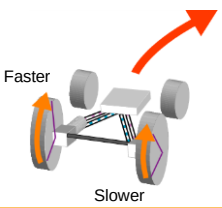
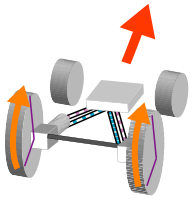
Encoders

Both motors receive equal current. Encoder reads rev/sec of each wheel and indicates that right motor is turning more slowly.



Encoder sends more current to the right motor and the chair runs straight again.



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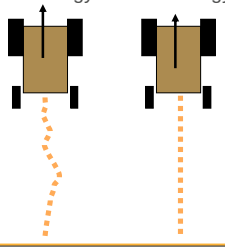
With & Without Tracking

FWD without tracking technology

FWD with tracking technology



Tracks straight while allowing users to conquer slopes, thresholds, obstacles

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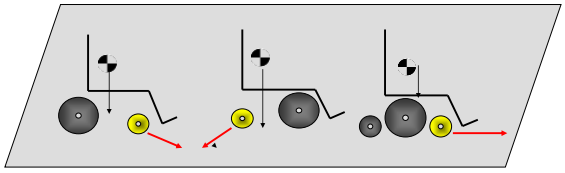
Casters



Front casters affected by gravity, directing front of chair down slope

Rear casters affected by gravity, directing rear of chair down slope

Casters or stabilizers minimally affected by gravity, chair traverses in a straight line

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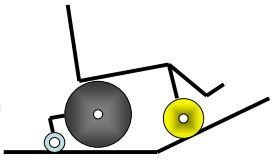
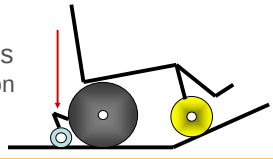
Grade Transition

RWD

Fixed anti-tipper
can cause high centering of the drive wheels



Dynamic rear stabilizers
allow drive wheel to stay on the ground



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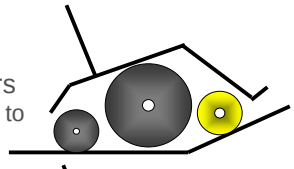
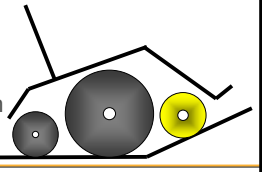
Grade Transition

MWD

Fixed front stabilizers
can cause drive wheels to high center



Dynamic front stabilizers
allow drive wheels to stay on the ground



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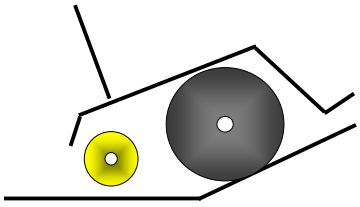
Grade Transition

FWD

No front or rear anti-tipper or stabilizers – might more easily transition onto an incline



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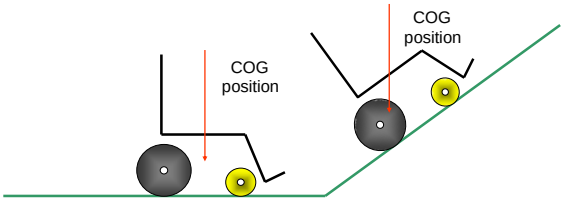
Uphill Performance

RWD

- COG moves back towards drive wheels.
- Improves traction - very good control
- Anti-tippers required to prevent chair from flipping over



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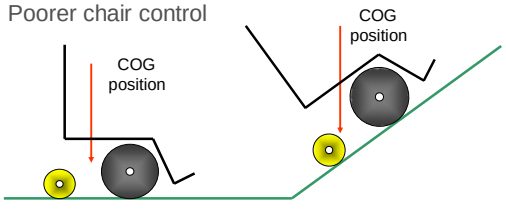
Uphill Performance

FWD

- COG moves towards casters
- Loses traction on drive wheels
- Poorer chair control



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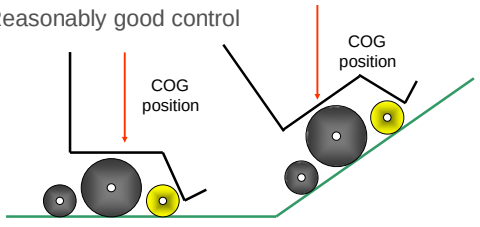
Uphill Performance

MWD

- COG moves towards casters
- Loses some traction on drive wheels
- Reasonably good control



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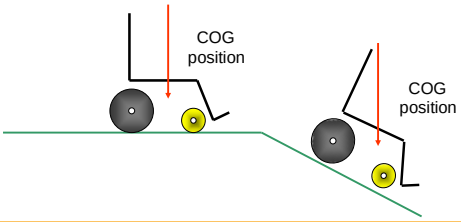
Downhill Performance

RWD

- COG moves forward towards casters
- Reduces traction on drive wheels
- Decreased directional and brake control



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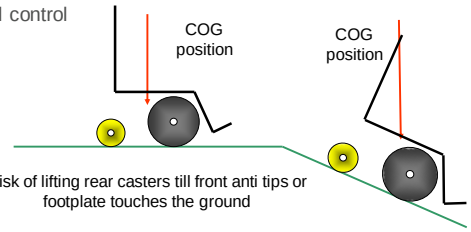
Downhill Performance

FWD

- COG moves forwards towards drive wheels.
- Increases traction on drive wheels
- Good control



Risk of lifting rear casters till front anti tips or footplate touches the ground

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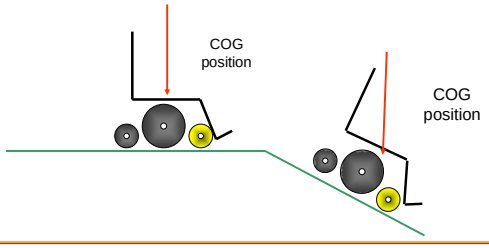
Downhill Performance

MWD

- COG moves forward towards front casters
- Reasonably good control



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Downhill Performance

Potential Concern :

- Forward pitching on downhill slopes could be a problem
- COG displacement

Solution!

Front suspension acts as a dampener to reduce pitching

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Suspension

Clinical Benefits of Suspension

- Reduces vibration and jarring for:
  - Pain reduction
  - Postural control
  - Spasticity reduction
  - Minimize sliding
  - ↑ sitting tolerance
- Terrain Navigation
  - School
  - Work
  - Community
    - Shopping
    - Gravel
    - Sidewalks
  - Weather elements

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Maneuverability vs Stability

- Problem with MWD - historically:
- Fixed front stabilizers can sacrifice obstacle climbing ability, *however….*
- Dynamic front stabilizers can affect stability and comfort of the ride

- Solution

Base Suspension!

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Stability

- Stability is increased by:
  - Larger base of support
  - Positioning the center of mass within the base (between drive wheels and casters)
  - Using stabilizers or anti-tippers
- Stability *might* also be challenged by external forces
  - Gravity, acceleration, deceleration, etc

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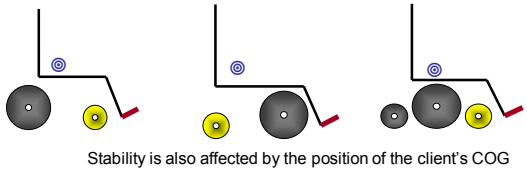
Stability

RWD and FWD
stable since mass is between drive wheels and casters

MWD
need stabilizer wheels since mass is over drive wheels



Stability is also affected by the position of the client's COG

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Clinical Justification

- Match client's needs to necessary PWC package
  - Explain need for base
    - Match current coding requirements
  - Identify how client's diagnosis and function support choice
  - Discuss negative affects to client if chosen base is not approved

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Pieces of the Power Puzzle

- Evaluation
- Seating & Positioning
- Power base
- **Electronics & Programming**
- Access
- Training
- Documentation & Funding

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Electronics

Things to consider:

1. Input device
2. Location
3. Programming
4. Electronics package

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Electronics

- Flexibility
  - Clients needs/goals/function determine parts
  - Prescribe for today with tomorrow in mind
- User friendly
- Keep It Simple
  - Ensure correct use
  - Maximize chance of funding
- Adjustability
- Programmability

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Electronics

- **Non Expandable:**

- **Expandable:**

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Non-Expandable vs. Expandable

Non-Expandable
- Joystick only
- ≤ 2 actuators
- Simple to use
- Basic programming options
- Useful for client with non-progressive condition

Expandable
- Specialty Controls
- Multiple Drive Input Devices
- Multi-actuator Systems
- Multiple Drive Profiles
- EADL Interfacing
- Enhanced programming options

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Electronics: Programming

- *One of the most important things you can do for any power chair user*
- Inappropriate programming can cause:
  - Inability to control the chair
  - Unsafe operation of the chair
  - Inability to learn to drive
  - Lack of confidence in the equipment
  - Refusal to use the equipment
  - Inefficient driving
  - Inability to access all environments

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Programming

- Speeds
- Tremor dampening
- Acceleration vs. Deceleration
- Torque
- Sensitivity
- Dead band
- Throw
- Active Orientation

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Programming

Electronic Customization:

- Programming considerations
  - Use existing templates
  - Develop and save your own templates
- Assign shortcuts
  - Common functions are easier to achieve
    - Program buttons and ports
    - Customize display menu
- Interfacing with Augmentative/Alternative Communication Devices or computers via Bluetooth
- EADL functions built into wheelchair
  - Access to the environment included through Infrared (IR) for TV, DVD/Blue ray player, stereo, etc.

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Type of Drive Input Device

- **Proportional** (joystick)
  - Variable speed and 360° of directional control
  - More fine-tuned control for course correction
  - Requires more user coordination, motor control

- **Non-proportional** (switched)
  - Pre-programmed speed, no directional control
  - Less fine-tuned control for course correction
  - Requires less user coordination/motor control

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Mode of Driving

- Momentary - chair only drives when user is actively operating the input device
  - Turning is less controlled and less efficient when using switched systems
- Latched - once input device is activated, chair drives without further activation until stop command
  - Right and left are still momentary
  - Allows course corrections
  - Allows control of the arc of turn

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Electronics: Programming

High Spasticity Considerations:

- Decrease acceleration
- Increase deceleration
- Decrease sensitivity
  - Smoothes out commands
- Expand neutral zone
  - Accommodate excess movements
- Turn joystick into "switch joystick"

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Electronics: Programming

Athetoid Considerations:

- Provide stability
- Decrease acceleration / Increase deceleration
- Expand neutral zone
  - Accommodate excess movements
- Turn joystick into “switch joystick”
- Decrease sensitivity

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Electronics: Programming

Specific Directional Weakness and or General Weakness

- Active orientation
- Reduce joystick throw
- Increase sensitivity
- Increase acceleration
- Program for Auto Mode
- Jacks for mode buttons

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Electronics: Programming

Geriatrics:

- Slower speeds
- Decrease acceleration
- Decrease overall chair power
- Decrease sensitivity
- Reduce joystick throw
- Reduce torque (depending on environment)

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Electronics: Programming

Pediatrics:

- Decrease sensitivity
- Decrease high speed torque
- Increase low speed torque
- Lower power :↓ overall chair power for safe use
- Programmable short-cut buttons with decals
- Limit number of profiles

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Electronics: Programming

Cognitive and Visual Impairments:

- Simple joystick with intuitive torque
- Programmable short-cut buttons with decals
- Lower speeds
- Decrease acceleration
- Increase deceleration
- Decrease overall chair power

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Pieces of the Power Puzzle

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Joystick Positioning & Support Examples

Standard Mount

Midline Mount

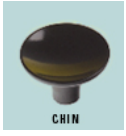
Midline Mount & Tray

Arm Trough

Swing away mount

Alternative Joystick Handles

Evaluation Kit (Bodypoint)



Custom Handle (handmade from splinting material)

Specialty Controls

Drive Station (Switch-It, Inc.)

Head Array (ASL, Inc.)

Mechanical Switches (ASL, Inc.)

Micro Pilot (Switch-It, Inc.)

And MANY MORE!

Additional Considerations

- Environment
  - Home
  - Work
  - School
  - Work stations/desks
  - Maneuverability in spaces
  - Entry and exit of settings
  - Community
  - Terrain
  - City vs. Rural

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Additional Considerations

- Lifestyle
  - Leisure activities
  - Support network
  - Travel

- Transportation
  - Drive automobile independently from power wheelchair.
  - Personal/family vehicle
  - Facility/commercial vehicle
  - Public transportation

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Additional Considerations

- Need for additional medical equipment (i.e. ventilator, feeding pump, IV pump, etc.)
- Weight capacity – need for heavy duty or bariatric options
- Growth capabilities
- Desire/need for high speed motors
- Attendant control and push options
- Transfer status
- Seat to floor height
- User preference

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Unable to use a power wheelchair?

POWER ASSIST SYSTEMS!

1. Individuals with limited upper extremity strength
2. Individuals with compromised respiratory systems
3. Individuals not "ready" for a power mobility device
   - Environment reasons
   - Psychological reasons

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Pieces of the Power Puzzle

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Be an investigator!!!!

- REMEMBER!!!! You are evaluating for potential, not a device!
- Discuss potential barriers to successful implementation with the family (i.e. accessibility of home and/or transportation).
- Check with the school team and family to find out their familiarity and level of comfort with power mobility.
- Interview the parents about their TRUE feelings about the device and if they'll use it with the client. Will they be willing to come for sessions to learn to use the device?

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Which path to take?

- Order a wheelchair immediately
- Driver's Education Program (aka power mobility training)
- Recommend skills to practice at home and/or school to further develop the foundation needed for driving a power mobility system
- Not appropriate for power mobility

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Ready to roll…

- This client will demonstrate clear comprehension of the task and cause/effect relationships.
- He/she is able to…
  - able to stop and go on command within 2 seconds of verbal cue 90% of the time.
  - able to drive straight for 200 feet without stopping.
  - avoid bumping into objects 90% of the time.
  - able to drive chair in all directions with no more than minimal verbal cues.
- A device is recommended based on what is known about the client's ability, and what is known about his support network.

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Driver Education Recommended

- This client has at least one reliable access site.
- He/she is able to visually scan and attend to the environment while driving.
- He/she exhibits the motivation to move and explore the environment.
- This client is able to follow basic 1 step commands (i.e. on/off or stop/go).
- This client also has a supportive team (family, caregivers, teachers, and therapists) that willing to assist to with carryover of skills training.

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WARNING!

- Training/Exploration sessions are important!
  - Misguided recommendations often come from clients who did not complete proper training or did not have the opportunity to trial different equipment prior to ordering a system.
  - Devices that are too high level may not be supported at home, at school, and/or abandoned all together.

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Driver's Education Overview

- Sessions are therapeutic and goal driven.
- Throughout the process caregivers are given "homework" to do with the client at home to increase success.
- Suggestions to school teams and outpatient therapists are also made.
- Members of the patient's therapy team are invited to come and observe.

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Training Tips

- Get the entire team involved
- Scavenger hunts
- Create real life scenarios
- Red Light/Green Light
- Play hide and seek
- Use familiar images attached to the switches when teaching directions.
- Drive in a variety of settings on various types of terrain.
- Create "game tapes" – video sessions to review with the clients and caregivers.

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Not right now…

- The client doesn't exhibit comprehension of cause/effect.
- He/she does not have a reliable access site.
- This client may have positioning issues preventing successful access at the time of the evaluation.
- Further medical evaluations or interventions may be necessary (i.e. suspected visual impairment)
- Other behaviors impede successful use of the device (i.e. self stimulatory or violent behaviors)

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Alternative Recommendations

- Medical consultations
- Seating and positioning
- Computer software programs to practice cause/effect and switch skills.
- Activities that can be done at home to encourage learning of skills needed for driving.
- Offer to contact the client's team to brainstorm skills that can be implemented into the client's daily life, therapy, or school program.
- Consider re-evaluating the client in 6 months-1 year.

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Not Appropriate for Power Mobility

- The client states that he/she refuses to utilize a power wheelchair.
- Other behaviors impede successful use of the device.
- Put him/herself or others in danger.

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The Big 3

Break down decision into (3) main areas

Seating

Base

Electronics

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Overall Recap

- Drive wheel position?
  - Speed?
  - Obstacle climbing?
  - Battery range?
- Weight capacity?
- Seating options?
  - Captain
  - Rehab
  - Modular
- Need for power seating?
  - Now, or in the future?
  - How many seat functions?
- Need for alternate controls?
- Progressive condition?
- What electronic customization is required?
- Does PWC need to interface with other AT?
  - AAC
  - Computer
  - EADL's

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WAIT! Don't Forget the Most Important Parts

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Pieces of the Power Puzzle

- Evaluation
- Seating & Positioning
- Power base
- Electronics & Programming
- Access
- Training
- **Documentation & Funding**

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Critical Questions

- Who is the funding source?
- What is the client's medical history?
  - Diagnosis (primary, secondary, etc.)
  - Surgeries (previous and upcoming)
  - Medications (past, present, future)
- What equipment has the patient had?
  - Not just wheelchairs
  - When was it received, why does it no longer meet their needs (medical - primary)? Who funded the equipment?

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Common Funding Sources

- State Medicaid Programs
- Private Insurance
- Medicare
- Worker's Compensation
- Veterans Affairs
- How does secondary insurance work?
  - Will it matter to you?
- Others…?

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Simplify

Your time is limited…

- As you go through your evaluation, keep in mind that at the same time you are also creating your documentation.
- Think about "climbing a ladder" to justify the equipment selected.
- Tie your thought process and selections to what will be down on paper.

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The First Steps

Preparation…..

- Think about… Who will review the letter or request for funding?
- What is this person's medical background? Do they have an understanding of the Durable Medical Equipment (DME) world that we live in every day?
- Remember… The reviewer only knows your patient by what is on paper. It is your job to "tell" the detailed story.
- Make a game-plan to keep it simple!

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Suggestions for Funding

- Gather your evidence!
  - Write a detailed initial evaluation.
  - Create data logs to track distance, success, and level of independence.
  - Take pictures and/or videos of the initiation evaluation and the "graduation day" from Driver's Education class.
  - Write an addendum to the original report.
  - Write a letter of medical necessity (LMN) and include reasons why the device is medically necessary (be sure to get the client's physician to sign the letter).

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Suppliers… The "7" Elements

The order for mobility equipment must contain all of the following 7 Elements:

1.Beneficiary Name

2.Description of the item ordered (can be specific with mfr name, or general "power wheelchair")

3.Date of face to face evaluation with MD

4.Pertinent diagnosis/conditions relating to the need for the equipment ordered

5.Length of need

6.Physician printed name and signature

7.Date of physician signature

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Documentation

- Is your evaluation completed electronically or hand-written?
- Letter of medical necessity?
- Template or not?
- Important documentation reminders:
  - Your clients are individuals
  - Proof-read!
  - Contradictions

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Final Questions to Ask Yourselves

1. Does the client and/or caregiver have a clear understanding of the plan?
2. Have I specified that the recommended equipment is in fact the minimal equipment essential to this client?
3. Have I demonstrated how I ruled out lesser level equipment?
4. Is the equipment that I am recommending in fact the least costly alternative?
5. Do I have all of the information needed for funding?
6. Has my documentation left the reader with a clear picture of the consequences to the client in the absence of having the recommended equipment?

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Course Objectives

Upon completion of this course, participants will be able to:

- Articulate the steps required to complete a thorough power mobility evaluation.
- List at least 2 differences in the performance of a rear wheel drive, front wheel drive, and mid-wheel drive power wheelchair on uphill, downhill, and even surfaces
- State the 3 clinical justifications for each dynamic power seating functions including tilt, recline, elevating leg rests, and seat elevate.
- Define the difference between expandable and non-expandable electronics
- Understand the critical components required in a clinical justification letter or evaluation when requesting funding for a power chair.

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Questions

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Sunrise Training & Education Programs

Thank You For Attending!

"Embrace every challenge! Determination and perseverance will significantly impact someone's life!"

Steve Boucher,
steve.boucher@sunmed.com

"Always remember that at the end of the day, your client is your number one priority!"

Angie Kiger, Clinical Education Specialist
angie.kiger@sunmed.com

MANUAL POWER ADULT PEDIATRICS SEATING GERIATRICS CONTROLS FUNDING